

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD -
CENTRAL VALLEY REGION**

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21 September 1993

To Owners and Operators
of Municipal Solid Waste Landfills

**TRANSMITTAL OF GENERAL ORDER AMENDING WASTE DISCHARGE
REQUIREMENTS AND MONITORING AND REPORTING PROGRAMS FOR
MUNICIPAL SOLID WASTE LANDFILLS IN THE CENTRAL VALLEY REGION,
AS LISTED IN ATTACHMENT I**

Enclosed is an official copy of Order No. 93-200 as adopted by the California Regional Water Quality Control Board, Central Valley Region, at its 17 September 1993 meeting. Waste Discharge Requirements and the Monitoring and Reporting Program for your Municipal Solid Waste Landfill, as identified on Attachment I, were amended by Order No. 93-200. You must comply with your waste discharge requirements, as amended by Order No. 93-200.

If you have any questions, please contact the Regional Board staff person responsible for your waste discharge requirements.

Thomas R Pinkos

THOMAS R. PINKOS, Chief
Land Discharge Section

WJM

Enclosure *Adopted Order and Standard Provisions*

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. 93-200

ORDER AMENDING
WASTE DISCHARGE REQUIREMENTS
FOR
MUNICIPAL SOLID WASTE LANDFILLS IN THE CENTRAL VALLEY REGION,
TO IMPLEMENT STATE WATER BOARD RESOLUTION NO. 93-62,
ADOPTED 17 JUNE 1993 AS STATE POLICY FOR WATER QUALITY CONTROL
UNDER SECTION 13140 OF THE WATER CODE

The California Regional Water Quality Control Board, Central Valley Region, (hereafter Board) finds that:

1. The federal Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act, authorizes development of nationwide minimum standards for disposal sites for municipal solid waste (MSW), including criteria for sanitary landfills (LF).
2. On 9 October 1991, the United States Environmental Protection Agency (USEPA) promulgated regulations that apply, in California, to dischargers who own or operate Class II or Class III landfill units at which municipal solid waste is discharged (MSWLF), regardless of whether or not a permit is issued (Title 40, Code of Federal Regulations, Parts 257 and 258, "federal MSW regulations"). The majority of the federal MSW regulations become effective on the "Federal Deadline", which currently is 9 October 1993.
3. Each state must "...adopt and implement a permit program or other system of prior approval and conditions to assure that each...[MSWLF]...within such state...will comply with the...[federal MSWLF regulations]." State regulations and policies promulgated to satisfy this requirement are subject to approval by USEPA.
4. On 17 June 1993, the State Water Resources Control Board adopted Resolution No. 93-62, titled *Policy for Regulation of Discharges of Municipal Solid Waste*, as State Policy For Water Quality Control, under Section 13140, et seq., of the California Water Code. The Policy directs each Regional Water Quality Control Board (Regional Water Boards) to revise the waste discharge requirements (WDRs) of each MSWLF in its respective region to comply with the federal MSW regulations.
5. All State agencies, including this Board, are required to comply with State Policy For Water Quality Control regarding any activities that could affect water quality. Regional Water Boards regulate discharges of waste that could affect the quality of waters of the state, including discharges of waste to land at MSWLFs, through the issuance and revision of waste discharge requirements.

6. The RWQCB can amend the waste discharge requirements of a group of similarly situated dischargers through a single Board action in cases where the amended requirements properly apply to each of the dischargers whose waste discharge requirements are so amended.
7. Field testing has demonstrated that releases of leachate and gas from MSWLFs that are unlined are likely to degrade the quality of underlying ground water. Research on liner systems for landfills indicates that single clay liners will only delay, rather than preclude, the onset of leachate leakage, and that the use of composite liners represents the most effective approach for reliably containing leachate and landfill gas.
8. Statistical data-comparison methods typically used to detect the migration of wastes from a waste management unit cannot be used in cases where the constituent to be monitored has a background concentration which does not exceed the constituent's detection limit in at least ten percent of the background samples. In such cases, an alternative non-statistical testing methodology is necessary which is sensitive, reliable, and not prone to falsely identifying a release.
9. This action to amend WDRs is exempt from the provisions of the California Environmental Quality Act (Public Resources Code Section 21000, et seq.), in accordance with Title 14, California Code of Regulations (CCR), Section 15301.
10. This Order implements (1) the Water Quality Control Plan for the Sacramento River, Sacramento-San Joaquin Delta, and San Joaquin River Basins (5A, 5B, 5C), Second Edition; (2) the Water Quality Control Plan for the Tulare Lake Basin (5D); (3) the prescriptive standards and performance goals of Chapter 15, Division 3, Title 23 of the California Code of Regulations, effective 27 November 1984, and subsequent revisions; (4) the prescriptive standards and performance criteria of Part 258, Title 40 of the Code of Federal Regulations (Subtitle D of the Resource Conservation and Recovery Act); and (5) State Water Resources Control Board Resolution No. 93-62, Policy for Regulation of Discharges of Municipal Solid Waste, adopted 17 June 1993.
11. This Order amends the existing waste discharge requirements of each discharger listed in Attachment 1 (hereafter Discharger). Those waste discharge requirements remain in full force and effect except as modified by this order.
12. The Board has notified each Discharger and interested agencies and persons of its intention to amend the waste discharge requirements listed in Attachment 1.
13. In a public hearing, the Board heard and considered all comments pertaining to these facilities and discharges.

IT IS HEREBY ORDERED that the Dischargers listed in Attachment 1, and their agents, assigns, and successors, in order to meet the provisions of Division 7 of the California Water Code, and the regulations adopted thereunder, shall comply with the following:

A. PROHIBITIONS

As of the Federal Deadline, discharges of waste to either an MSWLF that has not received wastes as of that date or to a lateral expansion of an MSWLF unit are prohibited, unless the discharge is to an area equipped with a containment system which meets requirements in **B. Specifications**, specified below.

B. SPECIFICATIONS

1. As of the Federal Deadline, municipal solid waste shall be discharged to either (1) that portion of a waste management unit which received wastes prior to the Federal Deadline (i.e., that active portion of the waste management unit which is within the boundaries of the Existing Footprint), or (2) to an area equipped with a containment system which meets the additional requirements for both liners and leachate collection systems specified below.
2. All containment systems installed after the Federal Deadline shall either: (1) include a composite liner which consists of an upper synthetic flexible membrane component (SL) and a lower component of soil. The SL shall be at least 40-mils thick (or at least 60-mils thick if of high density polyethylene) and shall be installed in direct and uniform contact with the underlying compacted soil component. The lower component shall be compacted soil that is at least two feet thick and that has an hydraulic conductivity of no more than 1×10^{-7} cm/sec (this specification is referred to as the Prescriptive Design); or (2) satisfy the performance criteria contained in 40 CFR 258.40(a)(1) and (c) and the criteria for an engineered alternative as provided by 23 CCR 2510(b), where the performance of the alternative containment system's components, in combination, equal or exceed the waste containment capability of the Prescriptive Design.
3. All containment systems installed prior to the Federal Deadline and which will accept wastes after the Federal Deadline shall include a composite liner which features as its uppermost component a synthetic liner (SL). The SL shall be at least 40-mils thick (or at least 60-mils thick if high density polyethylene) and shall be installed in direct and uniform contact with the underlying materials. The composite liner shall meet the performance criteria contained in 40 CFR 258.40(a)(1) and (c). For steep sideslopes (as defined in specification 4., below) the composite 40 mil (60 mil if HDPE) specification may be replaced by a non-composite 60 mil (80 mil if HDPE) specification.
4. Containment systems installed in those portions of an MSWLF where an engineering analysis shows that sideslopes are too steep to permit construction of a stable composite liner that meets the prescriptive standards contained in either B.2. or B.3., above shall include an alternative

liner on the sideslopes that both meets the performance criteria contained in 40 CFR 258.40(a)(1) and (c) and either: (1) is a composite liner and includes as its uppermost component a synthetic liner at least 40-mils thick (or at least 60-mils if high density polyethylene) that is installed in direct and uniform contact with the underlying materials; or (2) is not a composite liner, but includes a synthetic liner at least 60-mils thick (or at least 80-mils if of high density polyethylene) that is installed in direct and uniform contact with the underlying materials.

5. All containment systems shall include a leachate collection and removal system which shall convey to an appropriately lined sump or other appropriately lined collection area all leachate which reaches the liner. The LCRS shall not rely upon unlined or clay-lined areas for such conveyance.
6. New MSWLF units and lateral expansions shall not be located in wetlands unless the discharger has successfully completed, and the Board has approved, all demonstrations required for such discharge under 40 CFR 258.12(a).
7. If located in a 100-year floodplain, and if receiving waste on or after the Federal Deadline, MSWLF units shall not restrict the flow of the 100-year flood, reduce the temporary water storage capacity of the floodplain, or result in washout of solid waste so as to pose a hazard to human health and the environment. (40 CFR 258.11). Units which cannot comply with this requirement shall close by 9 October 1996, unless otherwise extended by the Board. (40 CFR 258.16)

C. RECEIVING WATER LIMITATIONS

Water Quality Protection Standards

The concentrations of Constituents of Concern in waters passing through the Points of Compliance shall not exceed the Concentration Limits established pursuant to Monitoring and Reporting Program No. 93-200, which is attached to and made part of this Order.

D. PROVISIONS

1. The waste discharge requirements of each Discharger listed in Attachment 1 are hereby amended and remain in full force and effect except as modified by this Order. Each Discharger shall comply with the requirements of this Order in addition to the provisions of their respective waste discharge requirements listed in Attachment 1. This Order shall supersede any conflicting provisions in the waste discharge requirements listed in Attachment 1.
2. The Discharger shall receive approval from the Executive Officer before discharging waste to containment areas or waste management units constructed after the effective date of this Order.

The Discharger shall submit to the Board all documentation (i.e., reports, plans, designs) required by this Order for review and approval by Board staff prior to implementation.

3. The Discharger shall comply with the Standard Provisions and Reporting Requirements, dated September 1993, which are hereby incorporated into this Order. The Standard Provisions and Reporting Requirements contain important provisions and requirements with which the Discharger must comply. A violation of any of the Standard Provisions and Reporting Requirements is a violation of these waste discharge requirements.
4. The Discharger shall comply with Monitoring and Reporting Program No. 93-200, which is attached to and made part of this Order. A violation of Monitoring and Reporting Program No. 93-200 is a violation of these waste discharge requirements.
5. The Discharger owning or operating an MSWLF that will receive waste on or after the Federal Deadline, shall document the Existing Footprint of the waste that has been incorporated by standard landfill practices on the date of the Federal Deadline, and shall submit a copy of such documentation in the form of a report to the Board, which shall be submitted prior to, or as part of, the first scheduled monitoring report following the Federal Deadline.
6. In accordance with the deadline provided below, the Discharger shall provide proof to the Board that the deed to the landfill facility property, or some other instrument that is normally examined during title search, has been modified to include, in perpetuity, a notation to any potential purchaser of the property stating that: (1) the parcel has been used as an MSWLF; (2) land use options for the parcel are restricted in accordance with the post-closure land uses set forth in the post-closure plan and in WDRs for the landfill; and (3) in the event that the Discharger defaults on carrying out either the post-closure maintenance plan or any corrective action needed to address a release, then the responsibility for carrying out such work falls to the property owner.

Dischargers owning or operating an MSWLF that completed final closure prior to 9 October 1991, shall provide proof of compliance to the Regional Water Board **by 9 October 1995**; for all MSWLFs that completed final closure between the close of business on 8 October 1991, and 17 September 1993, the discharger shall comply with the requirements of this section D.6. and provide proof of such compliance to the Regional Water Board **by the Federal Deadline**; for all MSWLFs that are either operating or have not completed closure, as of 17 September 1993, the discharger shall comply with the requirements of this section D.6. and provide proof of such compliance to the Regional Water Board **within sixty days after completing final closure**.

7. The Discharger shall maintain waste containment facilities and precipitation and drainage controls, and shall continue to monitor ground water, leachate from the landfill units, the vadose zone, and surface waters per Monitoring and Reporting Program No. 93-200 throughout the active life of the waste management units and the post-closure maintenance period.

8. If the MSWLF is located in an unstable area, the Discharger shall demonstrate to the Board that engineering measures have been incorporated into the design of the waste management unit to ensure that the integrity of the structural components of the unit will not be disrupted. (40 CFR 258.15) Units which cannot comply with this requirement shall close by 9 October 1996, unless otherwise extended by the Board. (40 CFR 258.16)
9. Dischargers owning or operating an MSWLF which has not been reclassified under 23 CCR 2510(d,e), 2530(b), and 2591(c) shall operate as a Class III landfill during the interim period from 17 September 1993 until such date as the landfill is reclassified in accordance with Chapter 15.
10. The Discharger shall complete the tasks outlined in these WDRs and the attached Monitoring and Reporting Program No. 93-200 in accordance with the following time schedule:

Task	Compliance Date
Documentation of Existing Footprint	per D.5.
Demonstration of wetlands location	per B.6. and E.2.
Documentation of floodplain restrictions	per B.7.
Proof of deed notation	per D.6.
Demonstration of unstable area	per D.8.
Report of waste discharge for reclassification	per E.3.
Closure report	per E.4.
Report on Water Quality Protection Standard	1 Jan 94
Monitoring reports	per M&RP

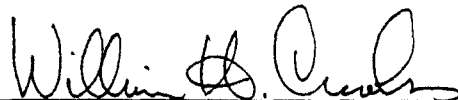
11. The Discharger shall comply with all applicable provisions of 23 CCR Chapter 15 and 40 CFR Part 258 that are not specifically referred to in this Order. If there is a conflict either between Chapter 15 and Part 258, or between this Order and existing waste discharge requirements, the more stringent requirement shall apply.

E. REPORTING REQUIREMENTS

1. The Discharger shall comply with the reporting requirements specified in this Order, in Monitoring and Reporting Program Order No. 93-200, and in the Standard Provisions and Reporting Requirements which are attached hereto and made part of this Order.
2. If new MSWLF units and lateral expansions are to be located in wetlands, the Discharger shall submit a report containing (a) a copy of the material considered by the U.S. Army Corps of Engineers in granting a Section 404 Permit for such discharge, (b) a copy of each Army Corps response to those submittals, and (c) any additional materials requested by the Board.

3. Dischargers owning or operating an MSWLF which has not been reclassified under 23 CCR 2510(d,e), 2530(b), and 2591(c) shall submit a revised report of waste discharge by **9 October 1993**, that is in full compliance with Article 9 of Chapter 15 and that provides all information necessary for the Board to reclassify the landfill pursuant to 23 CCR 2510(d,e) and 2591(c). Dischargers who have submitted such a report prior to the effective date of this Order shall submit a letter to that effect, in place of resubmitting the report.
4. The Discharger who owns or operates an MSWLF that received waste on or after 9 October 1991, that will have stopped receiving waste by the Federal Deadline, and that will have completed final closure within six months after the last receipt of waste shall submit a report to the Board by the Federal Deadline. This report shall either (1) validate that the MSWLF's final cover meets the requirements of 40 CFR 258.60(a), or (2) include any necessary updates to the closure plan and propose changes to the final cover necessary to bring the landfill into compliance with 40 CFR 258.60(a). The Discharger who owns or operates an MSWLF that received waste on or after 9 October 1991, and that will not have initiated final closure as of the Federal Deadline, shall submit a closure and post-closure maintenance plan (or submit suitable modifications to a preexisting plan) by the Federal Deadline, that complies with 40 CFR 258.60 and 258.61, with Article 8 of Chapter 15, and with Title 14 of the CCR.
5. The Discharger shall notify the Board in writing of any proposed change in ownership or responsibility for construction or operation of the MSWLFs. The Discharger shall notify the succeeding owner or operator in writing of the existence of this Order. A copy of that notification shall be sent to the Board.

I, WILLIAM H. CROOKS, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Region Water Quality Control Board, Central Valley Region, on 17 September 1993.



WILLIAM H. CROOKS, Executive Officer

Attachments

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. 93-200
FOR
MUNICIPAL SOLID WASTE LANDFILLS IN THE CENTRAL VALLEY REGION,
TO IMPLEMENT STATE WATER BOARD RESOLUTION NO. 93-62,
ADOPTED 17 JUNE 1993 AS STATE POLICY FOR WATER QUALITY CONTROL
UNDER SECTION 13140 OF THE WATER CODE

The monitoring and reporting program of each of the dischargers listed in Attachment 1 is amended. Each discharger shall comply with the provisions of this amendment, in addition to the provisions of the Monitoring and Reporting Program which is incorporated in existing waste discharge requirements. The provisions of this Amendment supersede any conflicting provisions in the existing monitoring and reporting program.

Compliance with this Amendment to Monitoring and Reporting Program, and with the companion Standard Provisions and Reporting Requirements, is ordered by the Amendment to Waste Discharge Requirements Order No. 93-200. Failure to comply with this Program, or with the Standard Provisions and Reporting Requirements, constitutes noncompliance with the WDRs, its amendment, and Division 7 of the Water Code, and can result in the imposition of civil monetary liability.

A. REPORTING

The Discharger shall report monitoring data and information as required in the Monitoring and Reporting Program (both original and amended) and as required in the Standard Provisions and Reporting Requirements.

Reports which do not comply with the required format will be REJECTED and the Discharger shall be deemed to be in noncompliance with the WDRs.

B. REQUIRED MONITORING REPORTS

1. Water Quality Protection Standard Report

The Discharger shall submit a report by **1 January 1994** which defines the Water Quality Protection Standard. If such a report has been previously submitted, the Discharger shall so notify the Board and identify the report, but shall also modify the report to add any new Constituents of Concern as required by 40 CFR 258.

The report shall:

- a. Identify all distinct bodies of ground water that could be affected in the event of a release from the MSWLF. This list shall include at least the uppermost aquifer underlying the

MSWLF and any permanent or ephemeral zones of perched water underlying the MSWLF;

- b. Demonstrate that the MSWLF's existing and proposed monitoring systems meet:
 - i. the requirements of 40 CFR 258.51(a,c, and d) and 23 CCR 2550.7(b); and
 - ii. the requirements of 23 CCR 2550.7(c), if the MSWLF is in close proximity to any affectable surface water body [only for dischargers whose waste discharge requirements, as of the effective date of this Order, have not been revised to incorporate the July 1, 1991, revisions to Article 5 of Chapter 15]; and
 - iii. the requirements of 23 CCR 2550.7(d), if the MSWLF is overlying an unsaturated zone that can be monitored feasibly [only for dischargers whose waste discharge requirements, as of the effective date of this Order, have not been revised to incorporate the July 1, 1991, revisions to Article 5 of Chapter 15];
- c. Include a map showing the Monitoring Points and Background Monitoring Points and showing the Point of Compliance under 23 CCR 2550.5 (i.e., the downgradient boundary of the unit, with respect to the flow direction of ground water in the uppermost aquifer);
- d. Estimate the Compliance Period under 23 CCR 2550.6; and
- e. Include a list of all Constituents of Concern (COC).
- f. Identify locations and methods of leachate sampling for detection of COCs.

2. Detection Monitoring Report

The Discharger shall submit reports of the results of detection monitoring in accordance with the schedule specified in the existing Monitoring and Reporting Program, or, alternatively, in accordance with the Fall/Winter and Spring/Summer Reporting Periods which end 31 March and 30 September, respectively.

3. Annual Monitoring Summary Report

The Discharger shall submit the Annual Monitoring Summary Report as specified in the Standard Provisions and Reporting Requirements.

4. Constituents-of-Concern (COC) 5 Year Report

The Discharger shall submit reports of the results of the monitoring for the Constituents of Concern every 5 years, or more frequently if required by the existing Monitoring and Reporting Program. The COC Report may be combined with a Detection Monitoring Report or an Annual Summary Report having a Reporting Period that ends at the same time.

5. Constituents-of-Concern (COC) Leachate Detection Report

The discharger shall report to the Board by no later than 31 January of a given year the analytical results of the leachate sample taken the previous Fall, including an identification of all detected COCs in Attachment 3 that are not on the MSWLF's Constituent of Concern list (non-COCs).

During any year in which an Spring leachate retest is performed, the discharger shall submit a report to the Board, by no later than 31 July of that year, identifying all constituents which must be added to the MSWLF's COC list as a result of having been detected in both the (previous calendar year's) Fall sample and in the Spring retest sample.

C. REQUIRED MONITORING PROGRAMS

1. Detection Monitoring Program (DMP) under revised Article 5

Each Discharger shall comply with the following detection monitoring program by 9 October 1994, unless and until the Board revises the waste discharge requirements for the MSWLF to include an alternative detection monitoring program that complies both with the federal MSW regulations and with the most recent revisions to Article 5 of Chapter 15.

For each monitored medium, all Monitoring Points assigned to detection monitoring, and all Background Monitoring Points shall be monitored once each Fall/Winter and Spring/Summer (Fall/Winter and Spring/Summer Reporting Periods end on 31 March and 30 September, respectively) for the Monitoring Parameters listed in this Program.

For any given monitored medium, a sufficient number of samples shall be taken from all Monitoring Points and Background Monitoring Points to satisfy the data analysis requirements for a given Reporting Period, and shall be taken in a manner that ensures sample independence to the greatest extent feasible.

Ground water sampling shall also include an accurate determination of the ground water surface elevation and field parameters (pH, temperature, electrical conductivity, turbidity) for that Monitoring Point or Background Monitoring Point. Ground water elevations taken prior to purging the well and sampling for Monitoring Parameters shall be used to fulfill the Spring and Fall ground water gradient/direction analyses required. For each monitored ground water body, the discharger shall measure the water level in each well and determine ground water gradient and direction at least quarterly, including the times of expected highest and lowest elevations of the water level for the respective ground water body. Ground water elevations for all background and downgradient wells for a given ground water body shall be measured within a period of time short enough to avoid temporal variations in ground water flow which could preclude accurate determination of ground water gradient and direction. This information shall be included in the twice-yearly monitoring reports.

Statistical or non-statistical analysis shall be performed as soon as the monitoring data are available.

2. Constituents-of-Concern 5 Year Monitoring Program

In the absence of evidence of a release being indicated, the discharger shall monitor all Constituents of Concern as follows:

The discharger shall sample all Monitoring Points and Background Monitoring Points for each monitored medium for all COCs every fifth year (or more frequently if required by the existing Monitoring and Reporting Program), beginning with the Winter of 1996 (first Reporting Period ends 31 March 1996), with subsequent COC monitoring efforts being carried out every fifth year thereafter alternately in the Summer (Reporting Period ends 30 September) and Winter (Reporting Period ends 31 March).

D. WATER QUALITY PROTECTION STANDARD

The Water Quality Protection Standard (Standard) shall consist of the following elements:

- a. Constituents of Concern;
- b. Concentration Limits;
- c. Monitoring Points;
- d. Points of Compliance;
- e. Compliance Period.

In addition to these elements, Monitoring Parameters shall also be established.

1. Constituents of Concern

- a. *For MSWLFs lacking a functioning LCRS:*

Beginning on 9 October 1994, for any MSWLF that does *not* have both a liner and a leachate collection and removal system (LCRS) that produces leachate:

- i. The "COC list" (list of Constituents of Concern required under 23 CCR 2550.3) shall include all constituents listed in the existing waste discharge requirements as of the effective date of this Order, all constituents listed in Attachment 3, and the following additional COCs: dissolved or total organic carbon, dissolved iron, carbonate, bicarbonate, alkalinity, dissolved aluminum, dissolved chromium VI, and dissolved manganese. The discharger shall monitor all COCs every five years (or more frequently if required by the existing Monitoring and Reporting Program).

- ii. For each Attachment 3 constituent that is newly added to the MSWLF's COC list due to this order, the discharger shall establish a reference background value by analyzing at least one sample each quarter from each Background Monitoring Point for a period of at least one year, beginning with the date of this Program. Once this reference set of background data is collected, the discharger shall include it as a separate, identified item in the next monitoring report submittal.

b. *For MSWLFs having a functioning LCRS:*

Beginning on 9 October 1994, for any MSWLF equipped with both a liner and a leachate collection and removal system (LCRS) that produces leachate:

- i. The COC list shall include:
 - (1) all waste constituents listed in the waste discharge requirements as of the effective date of this Order; and
 - (2) each Attachment 3 constituent that is not already a COC for the MSWLF, and that both:
 - (a) is detected in a sample of the MSWLF's leachate which the discharger shall collect during Fall of each year; and
 - (b) is also detected in a retest leachate sample collected the following Spring. The discharger need take and analyze this retest sample only in cases where the annual leachate sample, taken the previous Fall under this section, identifies new-COCs. The retest sample shall be analyzed only for the new-COCs detected in the Fall sample; and
 - (3) the following additional COCs: dissolved or total organic carbon, dissolved iron, carbonate, bicarbonate, alkalinity, dissolved aluminum, dissolved chromium VI, and dissolved manganese.
- ii. For each Attachment 3 constituent that is newly added to the MSWLF's COC list, the discharger shall establish a reference background value in each monitored medium by analyzing at least one sample each quarter from each Background Monitoring Point for a period of at least one year following the date the constituent is submitted to the Board as a new COC. Once this reference set of background data is collected, the discharger shall include it as a separate, identified item in the next monitoring report submittal.

For sites which have multi-unit detection monitoring systems, if any MSWLF unit lacks a functioning LCRS, COCs shall be determined as above under "a. *For MSWLFs lacking a functioning LCRS*".

The discharger shall monitor all COCs every five years (or more frequently if required by the existing Monitoring and Reporting Program).

2. Concentration Limits

Beginning 9 October 1994, the Concentration Limit for any given Constituent of Concern or Monitoring Parameter in a given monitored medium (e.g., the uppermost aquifer) at a MSWLF shall be as follows, and shall be used as the basis of comparison with data from the Monitoring Points in that monitored medium:

- a. The background value established in the WDRs by the Board for that constituent and medium;
- b. The constituent's background value, established anew during each Reporting Period using only data from all samples collected during that Reporting Period from the Background Monitoring Points for that monitored medium. Either:
 - i. The mean (or median, as appropriate) and standard deviation (or other measure of central tendency, as appropriate) of the constituent's background data; or
 - ii. The constituent's MDL, in cases where less than 10% of the background samples exceed the constituent's MDL; or
- c. A concentration limit greater than background, as approved by the Board for use during or after corrective action.

3. Monitoring Points

Monitoring Points (including background) for detection monitoring shall be those listed in the Monitoring and Reporting Program which is incorporated in the existing waste discharge requirements.

4. Points of Compliance

The Points of Compliance, for each MSWLF, either shall be those listed in the Monitoring and Reporting Program which is incorporated in the existing waste discharge requirements, or shall be established as required by Chapter 15.

5. Compliance Period

The Compliance Period for the MSWLF shall be the number of years equal to the active life of the MSWLF plus the closure period. Each time the Standard is exceeded (i.e., a release is discovered), the MSWLF begins a Compliance Period on the date the Board directs the Discharger to begin an Evaluation Monitoring Program. If the Discharger's Corrective Action Program (CAP) has not achieved compliance with the Standard by the scheduled end of the Compliance Period, the Compliance Period is automatically extended until the MSWLF has been in continuous compliance for at least three consecutive years.

6. Monitoring Parameters

Beginning on 9 October 1994, the Discharger shall analyze water samples from each water-bearing medium separately for the following Monitoring Parameters, and shall test the resulting data using either the statistical or non-statistical methods listed in the Standard Provisions (or alternative methods the Board finds meets the requirements of 23 CCR 2550.7(e)(6-10) and 40 CFR 258.53):

- a. Parameters that use statistical methods:
 - i. pH, total dissolved solids, specific conductivity, chloride, sulfate, and nitrate nitrogen;
 - ii. Each VOC (listed in Attachment 2) that equals or exceeds its respective MDL in at least ten percent of the samples taken from the Background Monitoring Points for a monitored water-bearing medium (i.e., surface water body, aquifer, perched zone, or soil-pore liquid) during a given Reporting Period; and
- b. Parameter that uses non-statistical method:
 - the composite monitoring parameter "VOC_{water}", consisting of all VOCs listed in Attachment 2.

Ordered by:



WILLIAM H. CROOKS, Executive Officer

17 September 1993

(Date)

ATTACHMENT I MUNICIPAL SOLID WASTE LANDFILL (SUBTITLE D)

	<u>Order No.</u>	<u>DISCHARGER</u>	<u>FACILITY NAME</u>
1	89-178	B & J DROP BOX CORPORATION	B & J DROP BOX SANITARY LANDFILL
2	92-212	BERRYESSA GARBAGE SERVICE INC. THOMAS AND MARILYN GOMEZ	BERRYESSA GARBAGE SERVICE INC.
3	90-232	CALAVERAS COUNTY DPW	ROCK CREEK LANDFILL
4	89-149	CITY OF FOLSOM	FOLSOM CORPORATION YARD LANDFILL
5	91-115	CITY OF RIO VISTA	RIO VISTA LANDFILL
6	88-207	CITY OF SACRAMENTO	28TH STREET LANDFILL FACILITY
7	90-122	CITY OF STOCKTON	AUSTIN ROAD LANDFILL FACILITY
8	92-225	CITY OF STOCKTON - DPW	FRENCH CAMP LANDFILL
9	91-228	COLUSA COUNTY DPW	EVANS ROAD LANDFILL
10	90-015	COLUSA COUNTY DPW	STONYFORD LANDFILL FACILITY
11	89-176	CONTRA COSTA WASTE SERVICE, INC.	GBF/PITTSBURG CLASS III LANDFILL (CONTRA COSTA SANITARY LANDFILL)
12	92-102	COUNTY OF AMADOR	BUENA VISTA LANDFILL
13	88-149	COUNTY OF EL DORADO	UNION MINE LANDFILL FACILITY
14	89-142	COUNTY OF LAKE	EASTLAKE SANITARY LANDFILL FACILITY
15	91-229	COUNTY OF NEVADA	McCOURTNEY ROAD LANDFILL
16	89-207	COUNTY OF SACRAMENTO, DPW	KIEFER BOULEVARD LANDFILL FACILITY
17	88-084	COUNTY OF TUOLUMNE	JAMESTOWN SANITARY LANDFILL
18	88-112	COUNTY OF TUOLUMNE AND UNITED STATES BUREAU OF LAND MANAGEMENT	GROVELAND SANITARY LANDFILL
19	89-148	FORWARD, INCORPORATED	FORWARD INCORPORATED WASTE MANAGEMENT FACILITY
20	93-122	GLENN COUNTY DPW	GLENN COUNTY SANITARY

ATTACHMENT I MUNICIPAL SOLID WASTE LANDFILL (SUBTITLE D)

	<u>Order No.</u>	<u>DISCHARGER</u>	<u>FACILITY NAME</u>
21	92-215	L AND D LANDFILL COMPANY	L AND D LANDFILL
22	88-102	OAKLAND SCAVENGER COMPANY	ALTAMONT SANITARY LANDFILL
23	90-270	PLACER COUNTY DPW	WESTERN REGIONAL SANITARY LANDFILL
24	89-046	SAN JOAQUIN COUNTY	CORRAL HOLLOW SANITARY LANDFILL
25	91-020	SAN JOAQUIN COUNTY	FOOTHILL SANITARY LANDFILL INCORPORATED
26	93-093	SAN JOAQUIN COUNTY	HARNEY LANE CLASS III LANDFILL
27	91-021	SAN JOAQUIN COUNTY	NORTH COUNTY SANITARY LANDFILL
28	90-143	SIERRA COUNTY	LOYALTON SANITARY LANDFILL
29	90-269	STANISLAUS COUNTY DPW	FINK ROAD SANITARY LANDFILL FACILITY
30	89-047	UNIVERSITY OF CALIFORNIA, DAVIS	CLASS III LANDFILL YOLO COUNTY
31	93-119	YOLO COUNTY	YOLO COUNTY CENTRAL LANDFILL FACILITY
32	93-080	YUBA -SUTTER DISPOSAL, INC.	OSTROM ROAD SANITARY LANDFILL
33	93-094	YUBA-SUTTER DISPOSAL AREA	YUBA SUTTER DISPOSAL AREA
34	89-091	YUBA-SUTTER DISPOSAL, INC.	YSDI SANITARY LANDFILL
35	87-196	ANDERSON SOLID WASTE INC.	CLASS III LANDFILLS AND CLASS II SURFACE IMPOUNDMENTS, SHASTA COUNTY
36	88-190	BUTTE COUNTY AND PARROT RANCH COMPANY	CLASS III LANDFILL AND CLASS II SURFACE IMPOUNDMENTS, BUTTE COUNTY
37	90-307	CITY OF PORTOLA	PORTOLA CLASS III LANDFILL, PLUMAS COUNTY
38	88-037	COUNTY OF MODOC	ALTURAS CLASS III LANDFILL, MODOC COUNTY
39	89-230	COUNTY OF SISKIYOU AND US FOREST SERVICE	BLACK BUTTE CLASS III LANDFILL, SISKIYOU COUNTY
40	88-036	COUNTY OF TEHAMA AND CITY OF RED BLUFF	CLASS III LANDFILL, TEHAMA COUNTY
41	90-229	INTERMOUNTAIN LANDFILL, INC.	CLASS III LANDFILL, SHASTA COUNTY

ATTACHMENT I MUNICIPAL SOLID WASTE LANDFILL (SUBTITLE D)

	<u>Order No.</u>	<u>DISCHARGER</u>	<u>FACILITY NAME</u>
42	74-462	LASSEN COUNTY	BIEBER SOLID WASTE DISPOSAL SITE
43	90-308	LASSEN COUNTY, WALKER et. al TRUST	WESTWOOD CLASS III LANDFILL, LASSEN COUNTY
44	89-203	MCCLOUD COMMUNITY SERVICES DISTRICT	MCCLOUD CLASS III LANDFILL, SISKIYOU COUNTY
45	90-309	PLUMAS COUNTY	CHESTER CLASS III LANDFILL, PLUMAS COUNTY
46	90-311	PLUMAS COUNTY AND US DEPARTMENT OF AGRICULTURE	GOPHER HILL CLASS III LANDFILL, PLUMAS COUNTY
47	90-190	SHASTA COUNTY	WEST CENTRAL CLASS III LANDFILL AND CLASS II SURFACE IMPOUNDMENT, SHASTA COUNTY
48	92-100	BROWNING-FERRIS INDUSTRIES OF CALIFORNIA, INC.	CHATEAU FRESNO FACILITY
49	91-226	CHEVRON USA INC., CITY OF COALINGA, COUNTY OF FRESNO	COALINGA SOLID WASTE SITE
50	74-061	CITY OF ATWATER	CITY OF ATWATER SWDS
51	76-023	CITY OF AVENAL	CITY OF AVENAL SWDS
52	71-192	CITY OF CLOVIS	CITY OF CLOVIS SWDS
53	89-232	CITY OF LOS BANOS	CITY OF LOS BANOS SWDS
54	90-182	COUNTY OF FRESNO	AMERICAN AVENUE LANDFILL
55	92-163	COUNTY OF KERN	ARVIN SANITARY LANDFILL
56	90-171	COUNTY OF KERN	BAKERSFIELD METROPOLITAN LANDFILL(BENA)
57	70-229	COUNTY OF KERN	BUTTONWILLOW SANITARY LANDFILL
58	91-227	COUNTY OF KERN	CHINA GRADE SANITARY LANDFILL
59	92-162	COUNTY OF KERN	KERN VALLEY SANITARY LANDFILL
60	73-057	COUNTY OF KERN	LOST HILLS SANITARY LANDFILL
61	70-221	COUNTY OF KERN	MCFARLAND-DELANO SANITARY LANDFILL
62	72-245	COUNTY OF KERN	SHAFTER-WASCO SANITARY LANDFILL

ATTACHMENT I MUNICIPAL SOLID WASTE LANDFILL (SUBTITLE D)

	<u>Order No.</u>	<u>DISCHARGER</u>	<u>FACILITY NAME</u>
63	72-244	COUNTY OF KERN	TAFT SANITARY LANDFILL
64	93-028	COUNTY OF MADERA AND MADERA DISPOSAL SYSTEM INC.	FAIRMEAD SWDS
65	81-120	GENTZ CONSTRUCTION COMPANY AND JOHN GENTZ	JEFFERSON AVE. SWDS
66	92-213	KINGS COUNTY WASTE MANAGEMENT AUTHORITY	HANFORD SWDS
67	91-018	MARIPOSA COUNTY DEPARTMENT OF PUBLIC WORKS	MARIPOSA COUNTY SWDS
68	90-185	MERCED COUNTY DEPARTMENT OF PUBLIC WORKS	BILLIE WRIGHT LANDFILL
69	93-120	MERCED COUNTY DEPARTMENT OF PUBLIC WORKS	HIGHWAY 59 CLASS III LANDFILL
70	90-221	ORANGE AVENUE DISPOSAL COMPANY	ORANGE AVENUE LANDFILL
71	71-263	SHELL WESTERN E & P INC.	NORTH BELRIDGE LANDFILL
72	71-133	TULARE COUNTY PUBLIC WORKS DEPARTMENT	BALANCE ROCK LANDFILL
73	73-237	TULARE COUNTY PUBLIC WORKS DEPARTMENT	EARLIMART LANDFILL
74	71-196	TULARE COUNTY PUBLIC WORKS DEPARTMENT	EXETER LANDFILL
75	78-173	TULARE COUNTY PUBLIC WORKS DEPARTMENT	KENNEDY MEADOWS LANDFILL
76	71-327	TULARE COUNTY PUBLIC WORKS DEPARTMENT	OROSI LANDFILL
77	92-214	TULARE COUNTY PUBLIC WORKS DEPARTMENT	TEAPOT DOME LANDFILL
78	90-222	TULARE COUNTY PUBLIC WORKS DEPARTMENT	VISALIA LANDFILL
79	93-116	TULARE COUNTY PUBLIC WORKS DEPARTMENT	WOODVILLE LANDFILL
80	79-099	US NAVAL AIR STATION LEMOORE	US NAVAL AIR STATION LEMOORE SWDS
81	90-237	WILLIAM SHUBIN, MARTHA SHUBIN AND BROWNING-FERRIS INDUSTRIES OF CALIFORNIA, INC.	CHESTNUT AVENUE LANDFILL

Attachment 2

MONITORING PARAMETERS FOR DETECTION MONITORING

Surrogates for Metallic Constituents:

- pH
- Total Dissolved Solids
- Specific Conductivity
- Chloride
- Sulfate
- Nitrate nitrogen

Constituents included in VOC_{water} (by USEPA Method 8260):

- Acetone
- Acrylonitrile
- Benzene
- Bromochloromethane
- Bromodichloromethane
- Bromoform (Tribromomethane)
- Carbon disulfide
- Carbon tetrachloride
- Chlorobenzene
- Chloroethane (Ethyl chloride)
- Chloroform (Trichloromethane)
- Dibromochloromethane (Chlorodibromomethane)
- 1,2-Dibromo-3-chloropropane (DBCP)
- 1,2-Dibromoethane (Ethylene dibromide; EDB)
- o-Dichlorobenzene (1,2-Dichlorobenzene)
- p-Dichlorobenzene (1,4-Dichlorobenzene)
- trans-1,4-Dichloro-2-butene
- 1,1-Dichloroethane (Ethylidene chloride)
- 1,2-Dichloroethane (Ethylene dichloride)
- 1,1-Dichloroethylene (1,1-Dichloroethene; Vinylidene chloride)
- cis-1,2-Dichloroethylene (cis-1,2-Dichloroethene)
- trans-1,2-Dichloroethylene (trans-1,2-Dichloroethene)
- 1,2-Dichloropropane (Propylene dichloride)
- cis-1,3-Dichloropropene
- trans-1,3-Dichloropropene
- Ethylbenzene
- 2-Hexanone (Methyl butyl ketone)
- Methyl bromide (Bromomethane)
- Methyl chloride (Chloromethane)
- Methylene bromide (Dibromomethane)

Attachment 2 (continued)

Methylene chloride (Dichloromethane)
Methyl ethyl ketone (MEK; 2-Butanone)
Methyl iodide (Iodomethane)
4-Methyl-2-pentanone (Methyl isobutylketone)
Styrene
1,1,1,2-Tetrachloroethane
1,1,2,2-Tetrachloroethane
Tetrachloroethylene (Tetrachloroethene; Perchloroethylene)
Toluene
1,1,1-Trichloroethane (Methylchloroform)
1,1,2-Trichloroethane
Trichloroethylene (Trichloroethene)
Trichlorofluoromethane (CFC-11)
1,2,3-Trichloropropane
Vinyl acetate
Vinyl chloride
Xylenes

Attachment 3

CONSTITUENTS OF CONCERN & APPROVED USEPA ANALYTICAL METHODS

Inorganics (by USEPA Method):

Antimony	6010
Barium	6010
Beryllium	6010
Cadmium	6010
Chromium	6010
Cobalt	6010
Copper	6010
Silver	6010
Tin	6010
Vanadium	6010
Zinc	6010
Arsenic	7061
Lead	7421
Mercury	7470
Nickel	7520
Selenium	7741
Thallium	7841
Cyanide	9010
Sulfide	9030

Volatile Organics (USEPA Method 8260):

Acetone
Acetonitrile (Methyl cyanide)
Acrolein
Acrylonitrile
Allyl chloride (3-Chloropropene)
Benzene
Bis(2-ethylhexyl) phthalate
Bromochloromethane (Chlorobromomethane)
Bromodichloromethane (Dibromochloromethane)
Bromoform (Tribromomethane)
Carbon disulfide
Carbon tetrachloride
Chlorobenzene
Chloroethane (Ethyl chloride)
Chloroform (Trichloromethane)
Chloroprene
Dibromochloromethane (Chlorodibromomethane)

Attachment 3 (continued)

1,2-Dibromo-3-chloropropane (DBCP)
1,2-Dibromoethane (Ethylene dibromide; EDB)
o-Dichlorobenzene (1,2-Dichlorobenzene)
m-Dichlorobenzene (1,3-Dichlorobenzene)
p-Dichlorobenzene (1,4-Dichlorobenzene)
trans-1,4-Dichloro-2-butene
Dichlorodifluoromethane (CFC 12)
1,1-Dichloroethane (Ethylidene chloride)
1,2-Dichloroethane (Ethylene dichloride)
1,1-Dichloroethylene (1,1-Dichloroethene; Vinylidene chloride)
cis-1,2-Dichloroethylene (cis-1,2-Dichloroethene)
trans-1,2-Dichloroethylene (trans-1,2-Dichloroethene)
1,2-Dichloropropane (Propylene dichloride)
1,3-Dichloropropane (Trimethylene dichloride)
2,2-Dichloropropane (Isopropylidene chloride)
1,1-Dichloropropene
cis-1,3-Dichloropropene
trans-1,3-Dichloropropene
Ethylbenzene
Hexachlorobutadiene
2-Hexanone (Methyl butyl ketone)
Isobutyl alcohol
Isodrin
Methacrylonitrile
Methyl bromide (Bromomethane)
Methyl chloride (Chloromethane)
Methyl ethyl ketone (MEK; 2-Butanone)
Methyl iodide (Iodomethane)
Methyl methacrylate
4-Methyl-2-pentanone (Methyl isobutyl ketone)
Methylene bromide (Dibromomethane)
Methylene chloride (Dichloromethane)
Naphthalene
Propionitrile (Ethyl cyanide)
Styrene
1,1,1,2-Tetrachloroethane
1,1,2,2-Tetrachloroethane
Tetrachloroethylene (Tetrachloroethene; Perchloroethylene; PCE)
Toluene
1,2,4-Trichlorobenzene
1,1,1-Trichloroethane, Methylchloroform

Attachment 3 (continued)

1,1,2-Trichloroethane
Trichloroethylene (Trichloroethene; TCE)
Trichlorofluoromethane (CFC-11)
1,2,3-Trichloropropane
Vinyl acetate
Vinyl chloride (Chloroethene)
Xylene (total)

Semivolatile Organics (USEPA Method 8270 - base, neutral, & acid extractables):

Acenaphthene
Acenaphthylene
Acetophenone
2-Acetylaminofluorene (2-AAF)
Aldrin
4-Aminobiphenyl
Anthracene
Benzo[a]anthracene (Benzanthracene)
Benzo[b]fluoranthene
Benzo[k]fluoranthene
Benzo[g,h,i]perylene
Benzo[a]pyrene
Benzyl alcohol
alpha-BHC
beta-BHC
delta-BHC
gamma-BHC (Lindane)
Bis(2-chloroethoxy)methane
Bis(2-chloroethyl) ether (Dichloroethyl ether)
Bis(2-chloro-1-methylethyl) ether (Bis(2-chloroisopropyl) ether; DCIP)
4-Bromophenyl phenyl ether
Butyl benzyl phthalate (Benzyl butyl phthalate)
Chlordane
p-Chloroaniline
Chlorobenzilate
p-Chloro-m-cresol (4-Chloro-3-methylphenol)
2-Chloronaphthalene
2-Chlorophenol
4-Chlorophenyl phenyl ether
Chrysene
o-Cresol (2-methylphenol)
m-Cresol (3-methylphenol)

Attachment 3 (continued)

p-Cresol (4-methylphenol)
4,4'-DDD
4,4'-DDE
4,4'-DDT
Diallate
Dibenz[a,h]anthracene
Dibenzofuran
Di-n-butyl phthalate
o-Dichlorobenzene (1,2-Dichlorobenzene)
m-Dichlorobenzene (1,3-Dichlorobenzene)
p-Dichlorobenzene (1,4-Dichlorobenzene)
3,3'-Dichlorobenzidine
2,4-Dichlorophenol
2,6-Dichlorophenol
Dieldrin
Diethyl phthalate
p-(Dimethylamino)azobenzene
7,12-Dimethylbenz[a]anthracene
3,3'-Dimethylbenzidine
2,4-Dimethylphenol (m-Xylenol)
Dimethyl phthalate
m-Dinitrobenzene
4,6-Dinitro-o-cresol (4,6-Dinitro-2-methylphenol)
2,4-Dinitrophenol
2,4-Dinitrotoluene
2,6-Dinitrotoluene
Di-n-octyl phthalate
Diphenylamine
Endosulfan I
Endosulfan II
Endosulfan sulfate
Endrin
Endrin aldehyde
Ethyl methacrylate
Ethyl methanesulfonate
Famphur
Fluoranthene
Fluorene
Heptachlor
Heptachlor epoxide
Hexachlorobenzene

Attachment 3 (continued)

Hexachlorobutadiene
Hexachlorocyclopentadiene
Hexachloroethane
Hexachloropropene
Indeno(1,2,3-c,d)pyrene
Isophorone
Isosafrole
Kepone
Methapyrilene
Methoxychlor
3-Methylcholanthrene
Methyl methanesulfonate
2-Methylnaphthalene
Naphthalene
1,4-Naphthoquinone
1-Naphthylamine
2-Naphthylamine
o-Nitroaniline (2-Nitroaniline)
m-Nitroaniline (3-Nitroaniline)
p-Nitroaniline (4-Nitroaniline)
Nitrobenzene
o-Nitrophenol (2-Nitrophenol)
p-Nitrophenol (4-Nitrophenol)
N-Nitrosodi-n-butylamine (Di-n-butylnitrosamine)
N-Nitrosodiethylamine (Diethylnitrosamine)
N-Nitrosodimethylamine (Dimethylnitrosamine)
N-Nitrosodiphenylamine (Diphenylnitrosamine)
N-Nitrosodipropylamine (N-Nitroso-N-dipropylamine; Di-n-propylnitrosamine)
N-Nitrosomethylethylamine (Methylethylnitrosamine)
N-Nitrosopiperidine
N-Nitrosopyrrolidine
5-Nitro-o-toluidine
Pentachlorobenzene
Pentachloronitrobenzene (PCNB)
Pentachlorophenol
Phenacetin
Phenanthrene
Phenol
p-Phenylenediamine
Polychlorinated biphenyls (PCBs; Aroclors)
Pronamide

Attachment 3 (continued)

Pyrene
Safrole
1,2,4,5-Tetrachlorobenzene
2,3,4,6-Tetrachlorophenol
o-Toluidine
Toxaphene
1,2,4-Trichlorobenzene
2,4,5-Trichlorophenol
2,4,6-Trichlorophenol
0,0,0-Triethyl phosphorothioate
sym-Trinitrobenzene

Organophosphorus Compounds (USEPA Method 8141):

0,0-Diethyl 0-2-pyrazinyl phosphorothioate (Thionazin)
Dimethoate
Disulfoton
Methyl parathion (Parathion methyl)
Parathion
Phorate

Chlorinated Herbicides (USEPA Method 8150):

2,4-D (2,4-Dichlorophenoxyacetic acid)
Dinoseb (DNBP; 2-sec-Butyl-4,6-dinitrophenol)
Silvex (2,4,5-Trichlorophenoxypropionic acid; 2,4,5-TP)
2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)